

## Miscellaneous Studies in the Family Aphididae (Hem. Hom.).<sup>1</sup>

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### V. NOTES ON SOME LACHNIDS IN THE BRITISH MUSEUM.

During the spring of 1919 the writer, while a member of the Detachment of United States Army Students in British Universities, had an opportunity to spend a few weeks in study at the Natural History Museum (British Museum), London. Unfortunately his time was limited, so only a portion of the aphid collection in the Museum was studied by him, having confined himself entirely to the study of the Lachnids in the Francis Walker and George Buckton Collections.

It is probable that the specimens in both of these collections are the ones from which Walker and Buckton drew up their descriptions, but unfortunately this is not at all certain. In neither collection do the specimens bear labels which would indicate whether or not they are type specimens, or whether they are the specimens used in the describing of the species. Those in the Buckton collection bear labels showing Buckton's determination, and in some few cases showing host and locality records. In the majority of the specimens the collection data are by means of key letters, the key to which is not now available. In the Walker collection the labels show his determination, host, locality and date of collection. As just stated, there is no certainty that these are the specimens from which Walker and Buckton drew up their descriptions and in some cases there is a discrepancy between their descriptions and the specimens. However the writer believes these were probably due to the lack of modern equipment, such as microscopes and micrometer scales, rather than to the fact that other specimens were used.

In the following notes the writer has listed the actual specimens available, and where discrepancies exist between them and the descriptions, such are noted. In addition the writer has attempted to place these species in their proper place as understood at the present time. In this he has followed the generic classification of A. C. Baker.<sup>2</sup> As for specific determi-

<sup>1</sup>This paper is a continuation of one, the first four parts of which were published in *Entomological News*, December 1918, pp. 361-369.

<sup>2</sup>Baker, A. C., U. S. Dept. Agr. Bull. 826, August, 1920.

nations he has been guided by the works of such aphid students as Cholodkovsky, Del Guercio, Mordwilko and others. Furthermore he wishes to acknowledge the many valuable suggestions received from and the very kind courtesy extended by Mr. Frederick Lainge of the Natural History Museum.

Tribe LACHNINI Baker.

Sub-tribe *Pterochlorina*.

1. *Stomaphis quercus* (Linn.). Walker; five slides (6 apterous ♀ ♀); "*quercus*; oak; Dulwich; Aug. 6-47."<sup>3</sup>

This is the very characteristic species found throughout Europe on oaks and the one for which Walker described the genus *Stomaphis*.<sup>4</sup>

2. *Pterochlorus longipes* (Dufour). Walker; four slides (2 alate, 2 apterous, several immature ♀ ♀); "*roboris*; oak; Southgate; July 5-47" (also July 27, Aug. 5 and Aug. 7, 1847).

These specimens agree very well with Walker's description except that the fourth and fifth antennal segments in the apterous females are equal, while the third is equal to the combined lengths of the two, and the rostrum extends only to the base of the third abdominal segment. Walker states that the fourth antennal segment is "less than half the length of the third; the fifth a little shorter than the fourth," and that the rostrum reaches to the "hind hips."

These differences are however of only minor importance. There is no doubt in the writer's mind that this is the same species that Del Guercio described as *Dryaphis longipes* (Dufour), although Del Guercio makes no mention of the sensoria that appear on the third, fourth and fifth antennal segments of the alate female. As Del Guercio points out, Buckton's *Dryobius croaticus* Koch is in all probability this same species, but his *Dryobius longipes* (Dufour) is not this one. That species belongs to the subtribe *Lachnina* of Baker, and not to the *Pterochlorina*, and specimens in his collection appear to be the same species as Walker's *piccae*, with the possibility of an incorrect host plant determination, or they may be an unnamed species very closely related to that one. See the discussion under *Dilachnus piccae* (Walker) No. 13 below.

<sup>3</sup>In each case the writer has listed the number of slides, with the number of specimens thereon, the collection in which they are found, and the data which appear on the labels.

<sup>4</sup>Walker, Francis. The Zoologist, vol. 28, p. 2000, 1870.

3. *Pterochlorus roboris* (Fabr.).

There are no specimens of this species in either the Walker or Buckton collections and it is included here only because it has been recorded by Morley<sup>5</sup> from the Isle of Wight, although it is possible that he had the same species as did Walker and followed him in naming it. However Lainge tells the writer that it is a very common species throughout England and Scotland.

4. *Pterochlorus cistatus* (Walker) Buckton.

What this species is the writer has no idea as Buckton's description is very meagre and there are no specimens in either collection that could very well fit the description.

5. *Pterochlorus viminalis* (Boyer). Buckton; four slides (2 alate, 2 apterous ♀♀); "*saligna* Sulz." taken from willow at Charshalton.

This is a common species in southeastern England, and for that matter throughout Europe and America. Morley has recorded it from Ipswich and Theobald from Kent.

Sub-tribe *Eulachnina*.

6. *Eulachnus agilis* (Kalt.). Walker; three slides (2 alate, 4 apterous, 1 immature ♀♀); "*agilis*: Scotch Pine; Southgate; June 15-47." Buckton; two slides (2 apterous, 3 immature ♀♀); "*agilis*." These specimens differ from Kaltenbach's description in that the sixth antennal segment of the alate female is subequal to the fifth and not "half as long as the fifth."

Koch figures the apterous of this species as a variety of *pincti* Fabr. Cholodkovsky states that the fourth antennal segment in the alate female is a little shorter than the fifth and much longer than the sixth. In these specimens, however, they are all three subequal. This is without doubt the true *E. agilis* (Kalt.). Theobald records this species from Kent, Morley from Suffolk, and Miss Jackson<sup>6</sup> from Scotland.

Sub-tribe *Lachnina*.

7. *Lachnus fasciatus* Burm. Walker; two slides (2 alate, 3 apterous ♀♀); "*costata*: Spruce fir; Southgate; June 25-47." (Also June 30-47).

<sup>5</sup>Morley, Claude. Jottings on Aphides taken during 1907 and 1908. The Entomologist, vol. 41, pp. 233-237, 1908.

<sup>6</sup>Jackson, Dorothy J. Further Notes on Aphides Collected principally in the Scottish Highlands. Scottish Naturalist, pp. 157-165, Sept.-Oct., 1919.

This species is the *fasciatus* Burm. of Del Guercio and other European students (*farinosa* Cholod.), the lanceolate rostrum, short first joint of the hind tarsus, the once-branched media, and the shaded forewings being quite typical. Walker indicates in his description that the media is twice-branched, but such is not the case in his specimens. Theobald records this from Kent, and Jackson from Kent and Scotland.

8. *Schizolachnus tomentosus* (De Geer). Walker; three slides "*pineti*; Scotch pine; Southgate; June 25-47;" one slide; "*pineti*; Scotch fir; Southgate; June 15-47." Buckton; three slides (2 alate, 2 apterous and 1 immature ♀♀); "*Mindarus abietinus* Koch." Buckton; three slides (1 alate, 1 apterous, several immature ♀♀); "*Schizoneura fuliginosa* Buck."

All these are the same species, and are the one described by Del Guercio as *tomentosus* (De Geer), not his *pineti* Koch. The media is once-branched, rather than twice-branched as indicated by Walker. This is indeed the *pineti* of Fabricius, which is a synonym of *tomentosus* De Geer. *Lachnus pineti* Koch is a different species.

9. *Dilachnus cupressi* (Buckton). Buckton; one slide (1 alate, 4 apterous, and 1 immature ♀♀); "*Lachnus cupressi*; Cornwall; Nov." This is the species described by Buckton from cypress at Cornwall, and these are perhaps the type specimens. Additional descriptive notes are herewith appended:

Alate viviparous female. Body rather small; antennae rather long for a Lachnid, reaching to the base of the abdomen, pale except at joint and segment VI. III with 3-4 secondary sensoria on apical half, IV with 2 secondary sensoria on apical half, and V with one secondary and one primary sensorium, VI with the usual primary and accessory sensoria. III is the longest segment, with IV, V, and VI subequal, combined being longer than III (V slightly longer than IV or VI, the latter two being practically equal). Cornicles quite large and prominent, being half as long (high) as wide at the base; dark colored. Cauda prominent, half-moon-shaped. Legs quite long. Body covered with many fine hairs, which appear longest and thickest on cauda, antennae and legs. Beak lanceolate, reaching to the base of the second abdominal segment. Measurements: Body length 2.487, width at thorax 0.969, width between eyes 0.350, antennae total 1.204-1.210, III 0.420-0.434, IV 0.182-0.190, V 0.210-0.215, VI 0.182-0.196 mm.; cornicles height 0.126-0.154, width at base 0.280, width at apex 0.075-0.080; hind tarsi 0.070 x 0.294; 0.070 x 0.312, wings length 3.88-4.06, width 1.39-1.42, expansion 9.04 mm. Media rather distinct for a lachnid, twice-branched. Stigma long and rectangular.

The only other record of this species the writer has been able to locate is that of Cholodkovsky who reports having taken a species which he believes to be this from "Der Krim" in October.

10. *Dilachnus hyalinus* (Koch). Buckton; one slide (2 alate ♂♂, 1 apterous and 1 immature ♀♀); "*macrocephalus*; Bramshot." Buckton; one slide (1 apterous ♀); "*abietis* Walker."

This species from *Picea excelsa* is the one described by Buckton as *Lachnus macrocephalus* sp. n., but which Cholodkovsky and Del Guercio place as a synonym of *Lachnus hyalinus* Koch. Mordwilko states that it is possibly a synonym. Buckton records it from Bramshot and Walthamston and Morley from Ipswich.

11. *Dilachnus juniperi* (De Geer). Walker; three slides (5 alate, 10 apterous, several immature ♀♀); "*juniperi*; juniper; Southgate; June 4-47 (also June 25)." Buckton; three slides (2 alate, 7 apterous ♀♀).

This is the species described by Del Guercio as *Lachniella juniperi* (Fabr.), (De Geer first named and described this species 1780), the sensoriation being typical.

In the alate females secondary sensoria occur as follows, III 6-7, IV 2-3, V 1-2; in the aptera IV 1-2, V 1. Antennal measurements of four alates are III 0.316-0.392 (0.364), IV 0.154-0.196 (0.168), V 0.210-0.238 (0.224), VI 0.210-0.252 (0.238) mm. The venation is irregular inasmuch as although the media is typically twice-branched, in two specimens both wings show the media but once-branched.

This species has been reported by Theobald from Kent and by Jackson from Kent and Scotland.

12. *Dilachnus laricis* (Walker). Walker; two slides (2 alate, 3 apterous, and 1 immature ♀♀); "*laricis*; larch; Southgate; July 25-47" (also August 2-47). The apterae of this species are very characteristic in that the body is covered with more or less distinct tubercles, these being the most prominent on the front of the head.

Without doubt this is the same species that Del Guercio<sup>7</sup> records from larch at Protolina, Italy, and describes as *Lachniella nigrotuberculata* n. sp., the body tubercles on the apterous females being so very characteristic.

(To be continued.)

<sup>7</sup>Redia, vol. 5, pp. 306-309, 1908.